

AMENDMENTS TO THE SPECIFICATION

- Please amend the Cross-Reference to Related Application(s) section which begins on page 1, line 3, as follows:

CROSS-REFERENCE TO RELATED APPLICATION

This is a Divisional of copending application serial number 10/165,510 filed June 6, 2002.

The present application contains subject matter related to ~~a co-pending~~copending U.S. Patent Application Serial No. 10/079,515 by Christy Mei-Chu Woo, John E. Sanchez, Darrell M. Erb, and Amit P. Marathe entitled "COPPER INTERCONNECT WITH IMPROVED BARRIER LAYER". The related application is assigned to Advanced Micro Devices, Inc. ~~and is identified by docket number 50432-321.~~

- Please amend the paragraph which begins on page 5, line 11, as follows:

The present invention provides ~~a manufacturing method, and an~~ integrated circuit ~~resulting therefrom has~~having a substrate and a semiconductor device thereon. A stop layer over the substrate has a dielectric layer formed thereon having an opening into which a conformal barrier is formed. A conformal barrier liner is formed in the opening, processed, and treated to improve adhesion. Portions of the conformal barrier liner on the sidewalls act as a barrier to diffusion of conductor core material to the dielectric layer. A conductor material in the opening over the vertical portions of the conformal barrier liner and the stop layer complete the conductor core. The integrated circuit has reduced size and good barrier resistance to electro-migration.

- Please amend the paragraph, which begins on page 8, line 30, as follows:

Referring now to FIG. 4, therein is shown the structure of FIG. 3 after deposition of a conformal barrier liner 144. The conformal barrier liner 144 is nonconductive and protects the via dielectric layer 112 and the second channel dielectric layer 110 from damage during conductor material deposition and prevents diffusion of the conductor material through to

these layers during operation. Despite the porosity of the various dielectric layers, the conformal barrier liner 144 is conformal and has a constant thickness.

- Please amend the paragraph, which begins on page 9, line 4, as follows:

Referring now to FIG. 5, therein is shown the structure of FIG. 4 after removal of the via stop layer 120 in the via opening 142. An anisotropic etching process such as reactive ion etching is used to first remove the horizontal portions of the conformal barrier liner 144 such that remaining liner portions 146 of the constant thickness remain on the vertical side walls of the via dielectric layer 112 and the second channel dielectric layer 110. It will be noted that, after the etching process has removed the via stop layer 120 in the via opening 142, the thickness of the second channel stop layer 122 in the second channel opening 141 has been reduced by approximately the same thickness as the thickness “t” of the via stop layer 120 in a stepped region 148. The stepped region 148 acts as a barrier to prevent conductor diffusion into the via dielectric layer 112.

- Please amend the Abstract which begins on page 17, line 1, as follows on the next page: